10097772

Five-Year Review Report

Third Five-Year Review Report
for
Mowbray Engineering Company Site
Greenville, Butler County, Alabama

September 2003

PREPARED BY:

United States Environmental Protection Agency
Region 4
Atlanta, Georgia

Approved by: _____ **Date:** 9/29/03

Winston A. Smith, Director
Waste Management Division
U.S. EPA, Region 4

Table of Contents

List of Acronyms

CD	Consent Decree
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
EPA	United States Environmental Protection Agency
CFR	Code of Federal Regulations
MDL	Maximum Detection Limit
NCP	National Contingency Plan
NPL	National Priorities List
O&M	Operation and Maintenance
OSWER	Office of Solid Waste and Emergency Response
PCBs	Polychlorinated biphenyls
PRP	Potentially Responsible Party
RA	Remedial Action
RAO	Remedial Action Objective
ROD	Record of Decision
SARA	Superfund Amendments and Reauthorization Act

Executive Summary

The remedy for the Mowbray Engineering Company in Greenville, Alabama, included solidification/stabilization of soils contaminated with Polychlorinated biphenyls (PCBs) and capping the monolith. The trigger for this five-year review was the actual start of construction on August 20, 1987. This is the third five-year review for this site and this five-year review found that the remedy is still protective. Alabama Power Company, the lead Potentially Responsible Parties (PRP), states that there is no plan to reuse the property.

Five-Year Review Summary Form

SITE IDENTIFICATION		
Site Name: Mowbray Engineering Company		
EPA Id: AL		
Region: 4	**State:** Alabama	**City/County:** Greenville/Butler
SITE STATUS		
NPL Status: Delisted		
Remediation Status: Final		
Multiple OUs? No	**Construction Completion Date:** 9/16/91	
Has site been put into reuse? No		
REVIEW STATUS		
Lead Agency: EPA		
Author Name: Humberto A. Guzman		
Author Title: Remedial Project Manager	**Author Affiliation:** U.S. EPA Region 4	
Review Period: 10/02/02 to 09/23/03		
Date of Site Inspection: October 29, 2002		
Type of Review: Pre-SARA		
Review number: Third review		
Triggering action: On-Site Construction Completion		
Triggering action date: August 20, 1987		
Due date: August 20, 2002		

Issues: N/A

Recommendations and Follow-up Actions: The solidification/stabilization remedy has been in place for 16 years and has been protective during that time. Alabama Power Company, the lead Potentially Responsible Party (PRP), has stated that there is no plan to reuse the property.

Protectiveness Statement: The assessment of this five-year review found that the remedy is protective.

Long-term Protectiveness: Long-term protectiveness has been established.

Other Comments: N/A

Mowbray Engineering Company Site
Greenville, Butler County, Alabama
Five-Year Review Report

I. Introduction

The purpose of a five-year review is to determine whether the remedy at a site is protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in Five-Year Review reports. In addition, Five-Year Review reports identify any issues found during the review and make recommendations to address them.

The Five-Year Review requirement applies to all remedial actions selected under Section 121 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, or the Superfund Act). Section 121 of CERCLA, as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), and Section 300.430 (f) (4) (ii) of the National Oil and Hazardous Substance Pollution Contingency Plan (NCP), require that periodic reviews be conducted at least every five years for sites where hazardous substances, pollutants or contaminants remain at the site above levels that allow for unlimited use and unrestricted exposure following the completion of all remedial actions. In June 2001, EPA's Office of Emergency and Remedial Response published the Comprehensive Five-Year Review Guidance, which provides the recommended structure for this review. The guidance is referenced as publication number EPA 540-R-01-007, or OWSER No. 9355.7-03B-P, and is also available on the EPA web site at <http://www.epa.gov/superfund/pubs.htm>

This is a policy Five-Year Review and the trigger date is defined as five years from the date that actual RA on-site construction is completed. The legal trigger date for this site is August 20, 1987. Remedial action, solidification and stabilization of soils contaminated with Polychlorinated biphenyls (PCBs), was completed on August 20, 1987.

II. Site Chronology

Table 1: Chronology of Site Events

Event	Date
Initial Discovery of problem or contamination	May 1975
Pre-NPL Responses	May 12, 1981 (Removal Action by EPA)
NPL Listing	September 8, 1983
Removal Actions Initiated	May 12, 1981, June 4, 1987 (EPA)
RI/FS Complete	September 25, 1986
ROD Signed	September 25, 1986
ROD Amendments or ESD's	N/A

Event	Date
Enforcement Documents Unilateral Administrative Order (UAO) Consent Decree Administrative Order on Consent (AOC)	Consent Decree - May 10, 1991
Remedial Design Start	September 25, 1986
Remedial Design Complete	N/A
Actual Remedial Action Start	June 4, 1987
Construction Dates (Start, Finish)	June 4, 1987, August 20, 1987
1st and 2nd Five Year Review (Report completed)	January 8, 1993, August 3, 1998

III. Background

Physical Characteristics

The Mowbray Engineering Company (MEC) Site is located approximately 50 miles southwest of Montgomery in the town of Greenville, Alabama. The site encompasses a 2.7 acre tract situated diagonally across from the former MEC facility at 300 Beeland Street.

The 2.7 acre tract now contains a solidified/stabilized monolith which is surrounded by a six-foot chain link fence on three sides. The property is in the 100-year flood plain of the Tanyard Branch which is the western boundary of the former swamp.

Land and Resource Use

The Site is presently an empty lot and it is located in a residential area. The City of Greenville, Alabama, has the title to the property and was assigned to restrict access and enforce the Operations and Maintenance (O&M) Plan in the Consent Decree (May 1991). Alabama Power Company, the lead Potentially Responsible Party (PRP), has stated that there are no plans for reuse of the property.

History of Contamination

The MEC facility repaired and reconditioned electrical transformers. From 1955 to 1974, MEC emptied waste Polychlorinated biphenyls (PCBs) transformer oil behind the facility. The oil entered a storm drain which discharged into a swamp area across the road. In 1974, MEC began collecting the waste oil for recycling. In 1985, the company and its owner, Norman Parker, filed bankruptcy petitions under Chapter 7 of the U.S. Bankruptcy Code.

Initial Response

The Alabama Water Improvement Commission and U.S. EPA conducted the first investigation at the MEC Site as a result of a major fish kill in the Tanyard Branch. This investigation, conducted in May 1975, revealed trace amounts of PCBs in the soils surrounding the swamp area. As a result, MEC installed underground storage tanks to collect the waste oil for recycling.

A second fish kill was observed in 1980. The State of Alabama sampled the soils in the swamp area and found PCBs levels as high as 500 mg/kg. Subsequently, the U.S. EPA performed an extensive sampling investigation in February 1981 to determine the extent of PCBs contamination in the soils. Following this investigation, the EPA performed a removal action which consisted of removing the top six inches of soil from the swamp and transporting these soils to a permitted disposal facility. This action was completed in August 1981. Confirmation sampling of the area following the removal, revealed a maximum PCBs concentration of 19 mg/kg which was below the established cleanup level of 50 mg/kg.

In 1983, the MEC Site was added to the National Priorities List with a Hazard Ranking System (HRS) score of 53.67. The HRS package listed groundwater as the main concern at the site mainly due to a nearby inactive pubic water supply well.

The Alabama Department of Environmental Regulation (ADEM) performed another investigation in November 1983 during a routine inspection. One of the grab samples collected in the swamp area during this visit revealed a PCBs concentration of 1,737 mg/kg. In April 1984, the EPA Field Investigation Team (FIT) performed a sampling investigation which revealed that the soils in the swamp area were contaminated with PCBs at levels similar to those observed prior to the 1981 removal action.

In 1985, the EPA received approval to conduct a Remedial Investigation/Feasibility Study (RI/FS) at the MEC Site. The RI/FS was performed by Camp, Dresser & McKee and was completed in July 1986. The results of the RI/FS concluded that PCBs were the only contaminants of concern, although low levels of phenol, chloroform, dichloroethane, and trichloroethanes were detected. PCBs were detected in groundwater monitoring well MW-2 at 2.4 ug/l during the 1986 remedial investigation. The low level PCBs were detected in an unfiltered sample and it was determined that it may not reflect dissolved concentrations.

The EPA Regional Administrator signed the Record of Decision (ROD), which described the selected remedial alternative, on September 25, 1986. The EPA performed the remedial actions which consisted mainly of solidification/stabilization of the PCBs contaminated soils and a six (6) foot thick cap. These actions were completed on August 20, 1987.

The first five-year review of the site was started with a site visit by the EPA in March 1992. During the visit, the site was observed to be overgrown with weeds and small trees. No operating and maintenance (O&M) activities had been performed for some time. Trees were growing in the drainage ditches around the monolith and some small trees were observed on top of the monolith structure. The trees on the monolith posed a potential problem in that the root systems provide a pathway for water to reach the monolith structure and thus initiate the erosion

process. The chain-link fence and gate surrounding the site were in tact but heavily covered with kudzu.

A follow-up inspection was performed on September 11, 1992. Site conditions were improved from the first visit due to O&M activities conducted in July 1992 by the Potentially Responsible Parties (PRPs). The drainage ditches had been redressed and lined with rip-rap to prevent erosion. All trees had been removed from the monolith cap as well as the drainage ditches. Surface soil and groundwater samples for PCBs analysis were collected at the site on September 11, 1992. Analysis of the samples indicated that PCBs in three surface soil samples. The levels detected were 0.17 mg/kg, 0.43 mg/kg, and 1.20 mg/kg, respectively. PCBs were not detected in the three groundwater samples collected.

A second five-year review was completed in August 1998. EPA collected soil, sediment, surface water, and groundwater samples. PCBs were detected in the samples at levels far below the cleanup level of 25 mg/kg, and the remedy at the site was deemed protective.

Basis For Taking Action

After two separate fish kills in Tanyard Branch and an EPA removal action, remedial action was necessary. The remedial actions described in the following section were implemented to address impacted soil, surface water, and groundwater at the Site. A remedial action objective (RAO) of 25 mg/kg for PCBs in soil was established to protect human health and the environment.

IV. Remedial Actions

Remedy Selection

The ROD, signed on September 25, 1986, determined that a cleanup was needed and that the selected remedy (listed below) would adequately protect public health, welfare, and the environment. The selected alternative consisted of:

* Excavation, removal, and disposal of the underground storage tanks located on the MEC property.

* Treatment or disposal of waste oils encountered in the swamp area and in the underground storage tanks by a TSCA approved method.

* Drainage diversion of surface run-on around the contaminated swamp area.

* Excavation of contaminated soils above 25 mg/kg PCBs and either off-site incineration, on-site incineration, or on-site stabilization/solidification of these soils. Incineration with an infrared-type incinerator was the preferred option.

* Grading and revegetation of the contaminated swamp area.

* Proper closure of the abandoned on-site city supply well (in accordance with ADEM well closure regulations).

* O&M activities were to include maintenance of the drainage diversion ditch, the revegetated area and, if applicable, monitoring and maintenance of the solidified matrix.

Remedy Implementation

The EPA contractor, HazTech Corporation, began remedial action site work on June 4, 1987. The remediation of the site consisted of the following:

* Solidification/Stabilization of PCBs contaminated soil (monolith)
* Capping of the resulting monolith
* Construction of a diversion ditch around the swamp
* Fencing off the swamp area
* Grading and revegetating the swamp area
* Closure of the abandoned city supply well
* Excavation, removal, and disposal of the underground storage tanks located on the MEC property
* Removal of abandoned transformers
* Disposal/Treatment of waste oil in the underground storage tanks, barrels, transformers, and tanker trailer.

Solidification/stabilization was chosen instead of incineration as the method to treat the PCBs contaminated soil. The selection was due to cost effectiveness. The EPA's Emergency Response Control Section (ERCS) determined that the small amount of soils needing remediation (approximately 2,500 cubic yards) and the low concentration (maximum 62 mg/kg PCBs) would have been inefficient and not cost effective to incinerate.

The waste oil contained in the underground storage tanks was shipped to Chemical Waste Management's Landfill in Emelle, Alabama for incineration. The oil found in the transformers, barrels, and a tanker trailer was shipped to PPM Recyclers in Atlanta, Georgia for destruction of PCBs. Small quantities of waste oils were found in the swamp but did not warrant off-site disposal.

Construction of a cap over the solidified material started on August 10, 1987, after a two-week delay searching for suitable clay to meet the requirements of the Resource Conservation and Recovery Act (RCRA). The cap consisted of a minimum of two (2) feet of compacted clay, a drainage layer of two (2) feet of compacted fine-medium sand, a water permeable geotextile fabric, and two (2) feet of topsoil. Grass was established on top of the cap to prevent degradation by erosion.

The abandoned city well was plugged by removing the well casing and pump, and then filling the well shaft with grout. The amount of grout pumped into the well equaled 5.5 yards. This volume was based on the original well construction records.

The cleanup ended on August 20, 1987, at a cost of $919,184.00. Confirmatory sampling of the cleanup was conducted after each segment of the Remedial Action resulting in documentation that the remaining PCBs levels in soil were below the 25 ppm cleanup goal.

Operations and Maintenance

An Operations and Maintenance (O&M) Plan was agreed to by the EPA and the PRPs with a Consent Decree (May 10, 1991) . The O&M plan outlines inspection and maintenance of the site, and the and sampling of the monitor wells and the soils on the site.

The Operation & Maintenance cost for the upkeep of the property and well sampling is approximately $10,000 annually at a maximum.

V. Progress Since the Last Review

The MEC site is in the same condition that it was since the last five-year review in 1998. No PCBs were detected in the soil and groundwater samples collected in 2000 and 2002.

VI. Five-Year Review Process

Community Notification and Involvement

A newspaper advertisement published October 27, 2002 was used to notify the community of this five-year review. The community did not respond to the advertisement. Interest in the site is not existent.

Document Review

The following documents were reviewed for this report:

- USEPA, 2001. Comprehensive Five-Year Review Final Guidance. Office of Emergency and Remedial Response, U.S. Environmental Protection Agency. EPA 540-R-01-007 June.
- USEPA, 1998. Five-Year Review Final Report, Mowbray Engineering Company Site, Greenville, Butler County, Alabama U.S. Environmental Protection Agency Region 4. July.
- USEPA, 1991. Superfund Site Close Out Report, Mowbray Engineering Company Site, Greenville, Butler County, Alabama U.S. Environmental Protection Agency Region 4. September.
- USEPA, 1986. Superfund Record of Decision, Mowbray Engineering Company Site, Greenville, Butler County, Alabama U.S. Environmental Protection Agency Region 4. September.

Data Review

Groundwater and soil monitoring has been conducted at the Site to evaluate progress of the remedial action since the end of the remedial action in 1987. Groundwater and soil samples are collected every two years at the site. Monitoring well (groundwater) data and soil data for this five-year review (years 2000 and 2002) are included in Appendix A. A summary of the data is listed in Table 2.

Site Inspection

A site inspection was conducted on October 29, 2002. The maintenance of the site and the integrity of the cap was inspected for this five-year review. A review of the groundwater and soil data was also conducted.

Interviews

Formal interviews were not conducted with the community. The lead PRP, Alabama Power Company, participated in the site inspection and provided the laboratory data collected in the years 2000 and 2002.

VII. Technical Assessment

Question A – Is the remedy functioning as described in the decision documents?

After 16 years of operation, the remedy is functioning as designed. The capped impoundment does not appear to be releasing PCBs.

Question B – Are the exposure assumptions, toxicity data, cleanup level, and RAOs used at the time of the remedy still valid?

Exposure assumptions, toxicity data, cleanup levels, and RAOs used at the time of the remedy are still valid.

Question C – Has any other information come to light that could call into question the protectiveness of the remedy?

No information has come forward to call into question the protectiveness of the remedy. There is no known risk to human health or the environment.

Technical Assessment Summary

Groundwater, soil, and sediment sampling results (Table 2 and Appendix A) obtained in October 2000 and 2002 by the Alabama Power Company indicate no detection of PCBs.

Table 2 - Laboratory Results for PCBs in Groundwater, Soils, and Sediments

Sample Locations	October 2000	October 2002
MW Well #2 (groundwater)	Not Detected	Not Detected
MW Well #4 (groundwater)	Not Detected	Not Detected
Ditch-Beland St. (sediment)	Not Detected	Not Detected
Ditch -Tanyard Branch Creek (sediment)	Not Detected	Not Detected
Property Center (soil)	Not Detected	Not Detected

Maximum Detection Limit (MDL) for PCBs in Groundwater is 0.005 mg/l

VIII. Issues

There are no issues associated with the site. The remedy remains protective of human health and the environment.

IX. Recommendations and Follow-Up Actions

Based on EPA's review of the 5-year performance of the remedy, the remedy is protective as has been protective for the past 16 years. Alabama Power Company, the lead Potentially Responsible Parties (PRPs), states that there is no plan to reuse the property. EPA will continue to conduct five-year reviews at the site to ensure that the remedy remains protective.

X. Protectiveness Statement

Based upon the site inspections and sampling results, the remedy is performing satisfactorily. The monolith cap, drainage ditches, and fence are to be in good condition. The PCB contaminated soils are controlled within the solidified matrix and cover material.

XI. Next Review

The next five-year review report is due on August 20, 2007.

APPENDICES

APPENDIX A

LABORATORY DATA

General Test Laboratory
P.O. Box 2641
Birmingham, Alabama 35291
(205) 664 - 6081

ALABAMA POWER
A SOUTHERN COMPANY

CERTIFICATE OF ANALYSIS

To: Mr. J. M. Godfrey
12N-0830

Customer Account : WMWMOBRY
Sample Date : 21-Oct-02
Customer ID :
Delivery Date : 23-Oct-02

Description: Mobray Site
Monitoring Well #2

Laboratory ID Number: AG33860

Name	Analyst	Test Date	Reference	Vio Spec	MDL	Results	Units
Pesticides							
PCB, Aroclor 1242	RAH	11/13/02	EPA 608		0.005	Not Detected	mg/l
PCB, Aroclor 1254	RAH	11/13/02	EPA 608		0.005	Not Detected	mg/l
PCB, Aroclor 1221	RAH	11/13/02	EPA 608		0.005	Not Detected	mg/l
PCB, Aroclor 1232	RAH	11/13/02	EPA 608		0.005	Not Detected	mg/l
PCB, Aroclor 1248	RAH	11/13/02	EPA 608		0.005	Not Detected	mg/l
PCB, Aroclor 1260	RAH	11/13/02	EPA 608		0.005	Not Detected	mg/l
PCB, Aroclor 1016	RAH	11/13/02	EPA 608		0.005	Not Detected	mg/l
General Characteristics							
Conductivity	AWR	10/23/02	EPA 120.1		0.	55.	umhos/cm
Water Table	AWR	10/23/02			0.0	11.7	Ft.
Field pH	AWR	10/23/02	EPA 150.1		0.00	5.63	SU
Temperature	AWR	10/23/02	Field Data		0.	22.8	Deg. C.
Miscellaneous							
Depth	AWR	11/15/02			0.	27.5	Feet
Method 608 - Extraction Date	RAH	10/28/02	DATE			10/28/02	

This Certificate is for the physical and/or chemical characteristics of the sample as submitted.

Comments:

cc:

Quality Control _____ **Supervision** _____ **Date:** 21-Nov-02

smk/NC

General Test Laboratory
P.O. Box 2641
Birmingham, Alabama 35291
(205) 664 - 6081

ALABAMA POWER
A SOUTHERN COMPANY

CERTIFICATE OF ANALYSIS

To: Mr. J. M. Godfrey
12N-0830

Customer Account : WMWMOBRY
Sample Date : 21-Oct-02
Customer ID :
Delivery Date : 23-Oct-02

Description: Mobray Site
Monitoring Well #4

Laboratory ID Number: AG33861

Name	Analyst	Test Date	Reference	Vio Spec	MDL	Results	Units
Pesticides							
PCB, Aroclor 1242	RAH	11/13/02	EPA 608		0.005	Not Detected	mg/l
PCB, Aroclor 1254	RAH	11/13/02	EPA 608		0.005	Not Detected	mg/l
PCB, Aroclor 1221	RAH	11/13/02	EPA 608		0.005	Not Detected	mg/l
PCB, Aroclor 1232	RAH	11/13/02	EPA 608		0.005	Not Detected	mg/l
PCB, Aroclor 1248	RAH	11/13/02	EPA 608		0.005	Not Detected	mg/l
PCB, Aroclor 1260	RAH	11/13/02	EPA 608		0.005	Not Detected	mg/l
PCB, Aroclor 1016	RAH	11/13/02	EPA 608		0.005	Not Detected	mg/l
General Characteristics							
Conductivity	AWR	10/23/02	EPA 120.1		0.	84.	umhos/cm
Water Table	AWR	10/23/02			0.0	8.9	Ft.
Field pH	AWR	10/23/02	EPA 150.1		0.00	6.93	SU
Temperature	AWR	10/23/02	Field Data		0.	19.4	Deg. C.
Miscellaneous							
Depth	AWR	11/15/02			0.	35.0	Feet

This Certificate is for the physical and/or chemical characteristics of the sample as submitted.

Comments:

cc:

Quality Control _____ Supervision _____ Date: 15-Nov-02

smk/NC

General Test Laboratory
P.O. Box 2641
Birmingham, Alabama 35291
(205) 664 - 6081

ALABAMA POWER
A SOUTHERN COMPANY

CERTIFICATE OF ANALYSIS

To: Mr. J. M. Godfrey
12N-0830

Customer Account : WMWMOBRY
Sample Date : 21-Oct-02
Customer ID :
Delivery Date : 23-Oct-02

Description: Mobray Site S# 1
Ditch Sediment by Beeland St

Laboratory ID Number: AG33862

Name	Analyst	Test Date	Reference	Vio Spec	MDL	Results	Units
Miscellaneous							
PCB, Concentration	RAH	11/18/02	EPA3550/600		1.	Not Detected	mg/kg

This Certificate is for the physical and/or chemical characteristics of the sample as submitted.

Comments:

cc:

Quality Control _____ **Supervision** _____ **Date:** 18-Nov-02

smk/NC

General Test Laboratory
P.O. Box 2641
Birmingham, Alabama 35291
(205) 664 - 6081

ALABAMA POWER
A SOUTHERN COMPANY

CERTIFICATE OF ANALYSIS

To: Mr. J. M. Godfrey
12N-0830

Customer Account : WMWMOBRY
Sample Date : 21-Oct-02
Customer ID :
Delivery Date : 23-Oct-02

Description: Mobray Site S# 2
Sediment in Middle of Field

Laboratory ID Number: AG33863

Name	Analyst	Test Date	Reference	Vio Spec	MDL	Results	Units
Miscellaneous							
PCB, Concentration	RAH	11/18/02	EPA3550/600		1.	Not Detected	mg/kg

This Certificate is for the physical and/or chemical characteristics of the sample as submitted.

Comments:

cc:

Quality Control _____ **Supervision** _____ **Date:** 18-Nov-02

smk/NC

General Test Laboratory
P.O. Box 2641
Birmingham, Alabama 35291
(205) 664 - 6081

ALABAMA POWER
A SOUTHERN COMPANY

CERTIFICATE OF ANALYSIS

To: Mr. J. M. Godfrey
12N-0830

Customer Account : WMWMOBRY
Sample Date : 21-Oct-02
Customer ID :
Delivery Date : 23-Oct-02

Description: Mobray Site S# 3
Ditch Sediment by Tanyard Brnch

Laboratory ID Number: AG33864

Name	Analyst	Test Date	Reference	Vio Spec	MDL	Results	Units
Miscellaneous							
PCB, Concentration	RAH	11/18/02	EPA3550/600		1.	Not Detected	mg/kg

This Certificate is for the physical and/or chemical characteristics of the sample as submitted.

Comments:

cc:

Quality Control _____ Supervision _____ Date: 18-Nov-02

smk/NC

General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al 35291

SOUTHERN DIV.

ALABAMA POWER
A SOUTHERN COMPANY

CERTIFICATE OF ANALYSIS

To: Mr. J. M. Godfrey
12N-0830

Customer Account : WMWMOBRY
Sample Date : 03-Oct-00
Customer ID :
Delivery Date : 05-Oct-00

Description: Mobray MW#2

Laboratory ID Number: AE31653

Name	Analyst	Test Date	Reference	Vio Spec	MDL	Results	Units
Pesticides							
PCB, Aroclor 1242	WM	10/18/00	EPA 608		0.005	Not Detected	mg/l
PCB, Aroclor 1254	WM	10/18/00	EPA 608		0.005	Not Detected	mg/l
PCB, Aroclor 1221	WM	10/18/00	EPA 608		0.005	Not Detected	mg/l
PCB, Aroclor 1232	WM	10/18/00	EPA 608		0.005	Not Detected	mg/l
PCB, Aroclor 1248	WM	10/18/00	EPA 608		0.005	Not Detected	mg/l
PCB, Aroclor 1260	WM	10/18/00	EPA 608		0.005	Not Detected	mg/l
PCB, Aroclor 1016	WM	10/18/00	EPA 608		0.005	Not Detected	mg/l
General Characteristics							
Conductivity	HRG	10/5/00	EPA 120.1		0.	56.	umhos/cm
Water Table	HRG	10/5/00			0.0	14.2	Ft.
Field pH	HRG	10/5/00	EPA 150.1	6.0	0.	5.15	SU
Temperature	HRG	10/5/00	Field Data		0.	22.9	Deg. C.
Miscellaneous							
Depth	HRG	10/5/00			0.	27.5	Feet

This Certificate is for the physical and/or chemical characteristics of the sample as submitted.

Comments:

cc:

Quality Control _____ **Supervision** _____ **Date:** 26-Oct-00

smk/NC

General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al 35291

ALABAMA POWER
A SOUTHERN COMPANY

CERTIFICATE OF ANALYSIS

To: Mr. J. M. Godfrey
12N-0830

Customer Account : WMWMOBRY
Sample Date : 03-Oct-00
Customer ID :
Delivery Date : 05-Oct-00

Description: Mobray MW#4

Laboratory ID Number: AE31654

Name	Analyst	Test Date	Reference	Vio Spec	MDL	Results	Units
Pesticides							
PCB, Aroclor 1242	WM	10/18/00	EPA 608		0.005	Not Detected	mg/l
PCB, Aroclor 1254	WM	10/18/00	EPA 608		0.005	Not Detected	mg/l
PCB, Aroclor 1221	WM	10/18/00	EPA 608		0.005	Not Detected	mg/l
PCB, Aroclor 1232	WM	10/18/00	EPA 608		0.005	Not Detected	mg/l
PCB, Aroclor 1248	WM	10/18/00	EPA 608		0.005	Not Detected	mg/l
PCB, Aroclor 1260	WM	10/18/00	EPA 608		0.005	Not Detected	mg/l
PCB, Aroclor 1016	WM	10/18/00	EPA 608		0.005	Not Detected	mg/l
General Characteristics							
Conductivity	HRG	10/5/00	EPA 120.1		0.	89.	umhos/cm
Water Table	HRG	10/5/00			0.0	10.	Ft.
Field pH	HRG	10/5/00	EPA 150.1		0.	6.54	SU
Temperature	HRG	10/5/00	Field Data		0.	20.0	Deg. C.
Miscellaneous							
Depth	HRG	10/5/00			0.	35.0	Feet

This Certificate is for the physical and/or chemical characteristics of the sample as submitted.

Comments:

cc:

Quality Control _____ **Supervision** _____ **Date:** 26-Oct-00

smk/NC

General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al 35291

ALABAMA POWER
A SOUTHERN COMPANY

CERTIFICATE OF ANALYSIS

To: Mr. J. M. Godfrey
12N-0830

Customer Account : WMWMOBRY
Sample Date : 03-Oct-00
Customer ID :
Delivery Date : 05-Oct-00

Description: Mobray MWS1 Soil Sample
Sediment in ditch by Beeland St

Laboratory ID Number: AE31655

Name	Analyst	Test Date	Reference	Vio Spec	MDL	Results	Units
Miscellaneous							
PCB, Concentration	RAH	10/18/00	EPA3550/600		1.	Not Detected	mg/kg

This Certificate is for the physical and/or chemical characteristics of the sample as submitted.

Comments:

cc:

Quality Control _____ **Supervision** _____ **Date:** 18-Oct-00

smk/NC

General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al 35291

ALABAMA POWER
A SOUTHERN COMPANY

CERTIFICATE OF ANALYSIS

To: Mr. J. M. Godfrey
12N-0830

Customer Account : WMWMOBRY
Sample Date : 03-Oct-00
Customer ID :
Delivery Date : 05-Oct-00

Description: Mobray MWS2 Soil Sample
Middle of Field

Laboratory ID Number: AE31656

Name	Analyst	Test Date	Reference	Vio Spec	MDL	Results	Units
Miscellaneous							
PCB, Concentration	RAH	10/18/00	EPA3550/600		1.	Not Detected	mg/kg

This Certificate is for the physical and/or chemical characteristics of the sample as submitted.

Comments:

cc:

Quality Control _____ **Supervision** _____ **Date:** 18-Oct-00

smk/NC

General Test Laboratory
Building Number 8
P.O. Box 2641
Birmingham, Al 35291

ALABAMA POWER
A SOUTHERN COMPANY

CERTIFICATE OF ANALYSIS

To: Mr. J. M. Godfrey
12N-0830

Customer Account : WMWMOBRY
Sample Date : 03-Oct-00
Customer ID :
Delivery Date : 05-Oct-00

Description: Mobray MWS3 Soil Sample
Sediment in ditch-Tanyard Brnch

Laboratory ID Number: AE31657

Name	Analyst	Test Date	Reference	Vio Spec	MDL	Results	Units
Miscellaneous							
PCB, Concentration	RAH	10/18/00	EPA3550/600		1.	1.	mg/kg

This Certificate is for the physical and/or chemical characteristics of the sample as submitted.

Comments:

cc:

Quality Control _____ **Supervision** _____ **Date:** 18-Oct-00

smk/NC

APPENDIX B

FIGURES

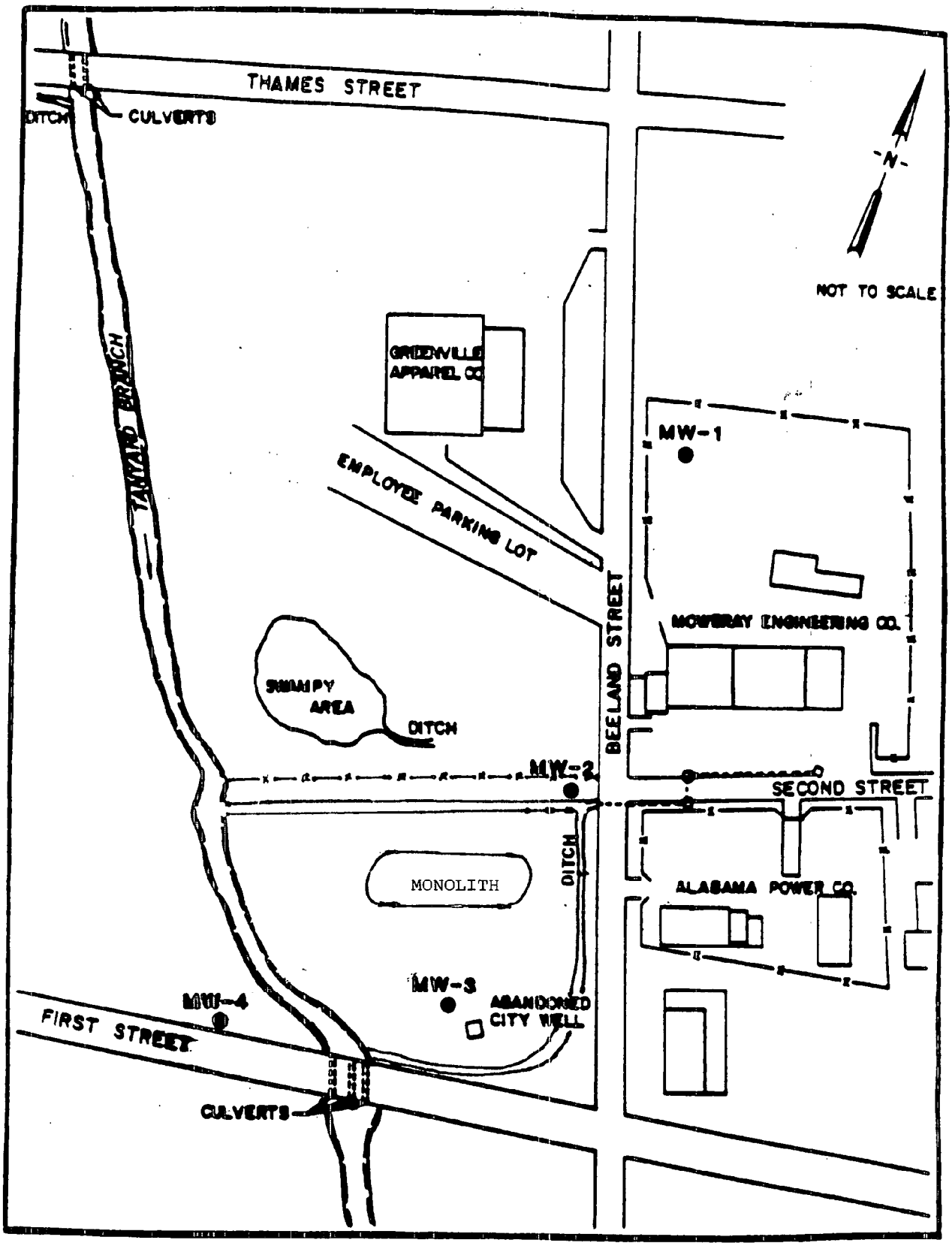

Figure 1 Monitor Well Locations.
Mowbray Engineering Company Site.
Greenville, Alabama.

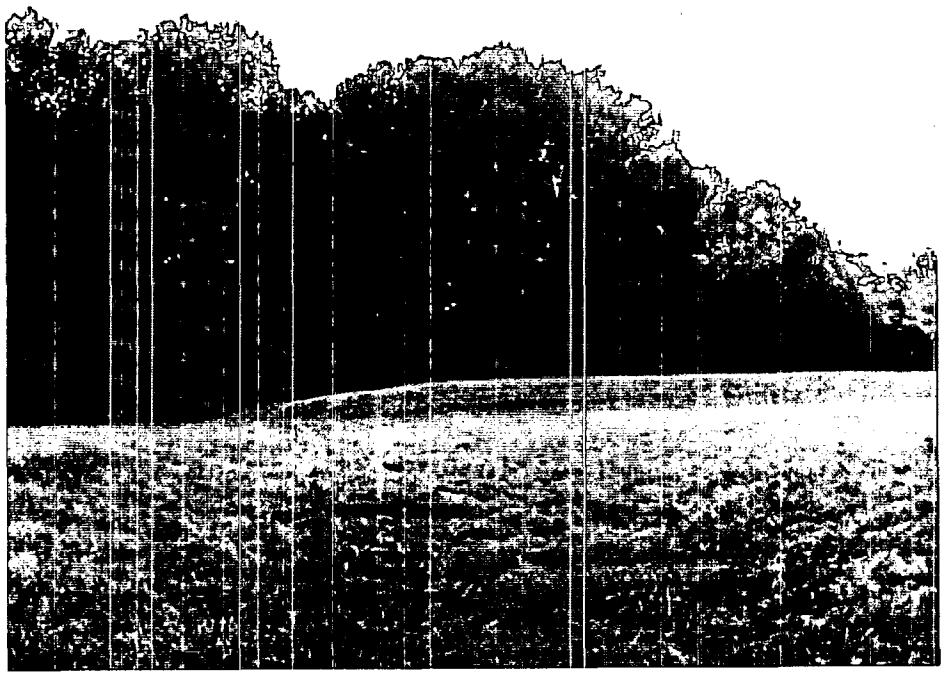

Figure 2 - View of Monolith from the SW side of site.

Figure 3 - Close-up of the capped monolith. Old MEC facility in background.